



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,233	10/15/2003	John Sanelli	72255/33238	6359
23380	7590	06/15/2005	EXAMINER	
TUCKER, ELLIS & WEST LLP 1150 HUNTINGTON BUILDING 925 EUCLID AVENUE CLEVELAND, OH 44115-1475			CAO, HUEDUNG X	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

57

Office Action Summary	Application No. 10/686,233	Applicant(s) SANELLI ET AL.	
	Examiner Huedung X. Cao	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11, 12, 18, 19, 21-25, 31, 32, 38 and 39 is/are rejected.
- 7) ☒ Claim(s) 6-10, 13-17, 20, 26-30, 33-37, 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered second claims 33 and 34 have been renumbered 35 and 36, and 35-38 have been renumbered 37-40 respectively.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 11-12, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by CHIANG et al. (US 6864852 B2).

As per claim 1, Chiang teaches that claimed “an antenna” system (Chiang, figure 20, antenna system 300) comprising:

Art Unit: 2821

at least one antenna element for sending and receiving a wireless signal (Chiang, figure 20, dipole element 308);

at least one conductive member, having an edge displaced from and substantially directed toward the at least one antenna element (Chiang, element 202), and cooperating therewith to establish a hemispherical beam pattern (Chiang, column 3, lines 17-31).

Claim 2 adds into claim 1, wherein the at least one antenna element comprises a pair of antenna elements, disposed respectively at opposite ends of the at least one conductive member, and cooperating therewith to establish a respective pair of hemispherical beam patterns (Chiang, figure 20, dipole elements 308, lines 17-31).

Claim 3 adds into claim 1 wherein the at least one antenna element comprises a plurality of antenna elements, disposed respectively along the periphery of the at least one conductive member, and cooperating therewith to establish a respective plurality of hemispherical beam patterns (Chiang, figure 20, dipole elements 308, lines 17-31).

Claim 4 adds into claim 3, wherein the at least one antenna element adapted to operate over a first wireless frequency band, and wherein a second portion of antenna elements are adapted to operate over a second wireless frequency band (Chiang, column 16, lines 37-46).

Claim 11 adds into claim 1, wherein the at least one conductive member comprises a single planar element, substantially coplanar with the at least one antenna element (Chiang, figure 20, element 202 and dipole element 308 orient in one planar).

Art Unit: 2821

Claim 12 adds into claim 1, wherein the at least one conductive member comprises a plurality of planar elements, substantially coplanar with the at least one antenna element (Chiang, figure 20, element 202 and dipole elements 308 orient in plurality of planar).

Claim 18 adds into claim 1 wherein the at least one antenna element is a dipole antenna and the at least one conductive member is at least one discrete component (Chiang, figure 20, dipole element 308, and active element 202);

Claim 19 adds into claim 1 wherein the at least one antenna element and at least one conductive member are formed on a single piece of circuit board material (Chiang, column 12, lines 56-64).

Claims 21-24, 31-32, and 38-39 are similar in scope to claims 1-4, 11-12, and 18-19; therefore, they are rejected for the same reason.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHIANG et al. (US 6864852 B2).

As per claim 5, Chiang teaches the claimed, the first and second wireless frequency bands are 2.4 Ghz and 5 GHZ wireless bands which Chiang does not

Art Unit: 2821

explicitly disclose. However, Chiang teaches the antenna 300 resonates at two related frequencies such as 5.25 Ghz and 2.45 Ghz (Chiang, column 16, lines 37-46). It would have been obvious to one of ordinary skill in the art to vary the frequency bands in order to meet with the particular design of the antenna and to maximize the efficiency of the antenna.

Claim 25 is similar in scope to claim 5; therefore, it is rejected for the same reason.

Allowable Subject Matter

6. Claims 6-10, 13-17, 20, 26-30, 33-37, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Prior Art does not teach wherein the at least one conductive member comprises a plurality of non-intersecting conductive members wherein each conductive member is associated with at least one antenna element; at least one conductive member comprises a substantially angled member; a sandwich module for providing a further level of antenna isolation; the antenna element is shorter than the respective edge of the conductive member.

Art Unit: 2821

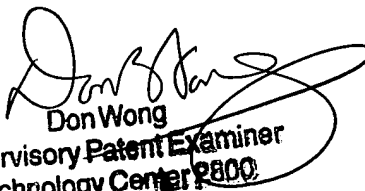
Inquires

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huedung Cao whose telephone number is (571) 272-1939.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Huedung Cao
Patent Examiner


Don Wong
Supervisory Patent Examiner
Technology Center 2800